

We claim:

1) An electric lamp, comprising:

a) a lamp envelope having an inner surface;
b) means within the lamp envelope for generating ultraviolet radiation;

c) a layer of a luminescent material adjacent the inner surface of the lamp envelope for generating visible light when impinged by said ultraviolet radiation; and

d) a base-coat layer, between said inner surface of said lamp envelope and said layer of luminescent material, for reflecting ultraviolet radiation which has passed through said layer of luminescent material back into said luminescent material for increasing the visible light output of said luminescent material, said base-coat layer comprising a particulate non-fluorescent oxidic material with a getter material on its surface which reacts with contaminants present in the lamp, said getter material being formed upon thermal decomposition of a getter precursor material during lehring.

2. A lamp according to claim 1, wherein said undercoat layer comprises a particulate aluminum oxide having a contiguous layer of an oxide of an alkaline earth metal or zinc or mixtures thereof formed by exposing the particulate aluminum oxide during

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the lehring (sintering) process to an effective amount of a precursor material of an alkaline earth metal oxide or a zinc oxide getter compound.

3. A lamp as claimed in claim 2, wherein said undercoat layer is sintered just prior to the envelope being sealed during manufacture of said lamp.

4. A lamp as claimed in claim 2, wherein said getter material includes an oxide of an alkaline earth metal or zinc selected from the group consisting of magnesium, calcium, strontium, barium, zinc, and mixtures thereof.

5. A lamp as claimed in claim 4, wherein said sintered mixture is derived from a soluble precursor compound of an alkaline earth metal oxide or zinc oxide or mixtures thereof in an aqueous suspension of aluminum oxide.

6. A lamp as claimed in claim 4, wherein said getter material is magnesium oxide.

7. A lamp as claimed in claim 2, wherein said layer of luminescent material comprises a halophosphate phosphor.

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8. A lamp as claimed in claim 7, wherein said getter material includes an oxide of an alkaline earth metal or zinc selected from the group consisting of magnesium, calcium, strontium, barium, zinc, and mixtures thereof.

9. A lamp as claimed in claim 8, wherein said sintered mixture is derived from a soluble precursor material of an alkaline earth metal or zinc and mixtures thereof in an aqueous suspension of aluminum oxide.

10. A lamp according to claim 1, wherein said means for generating ultraviolet radiation is comprised by an arc tube disposed within said lamp envelope, said arc tube including a filling of an ionizable material and a rare gas and a pair of discharge electrodes between which a discharge takes place during lamp operation.

11. A lamp according to claim 1, wherein said means for generating ultraviolet radiation comprises a filling of an ionizable material and a rare gas within said lamp envelope and a pair of discharge electrodes each adjacent a respective sealed end of said discharge vessel.

12. A low pressure mercury vapor fluorescent lamp, comprising:

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a) a tubular, light transmissive lamp envelope having opposing sealed ends and an inner tubular surface;

b) a filling of mercury and a rare gas;

c) a pair of discharge electrodes each arranged at a respective sealed end of said lamp envelope;

c) means for connecting said discharge electrodes to a source of electric potential outside of said lamp envelope, whereby during lamp operation a gas discharge is maintained between said discharge electrodes, which gas discharge emits ultraviolet radiation;

d) a first, light transmissive and ultraviolet radiation reflecting layer disposed on said inner surface of said lamp envelope, said first layer comprising a sintered mixture of an aluminum oxide material and a getter material which reacts with contaminants present in the lamp; and

e) a second, layer of luminescent material disposed on said first layer.

13. A lamp as claimed in claim 12, wherein said reflecting layer comprises a particulate aluminum oxide having a contiguous layer of an oxide of an alkaline earth metal or zinc or mixtures thereof formed by exposing the particulate aluminum oxide material during the lehring (sintering) process to an effective amount of an alkaline earth metal or zinc getter compound.

14. A lamp as claimed in claim 12, wherein said reflecting layer is sintered just prior to the envelope being sealed during manufacture of said lamp.

15. A lamp as claimed in claim 14, wherein said getter material includes an oxide of an alkaline earth metal or zinc selected from the group consisting of magnesium, calcium, strontium, barium, zinc, and mixtures thereof.

16. A lamp as claimed in claim 15, wherein said sintered mixture is derived from a soluble oxide precursor material of an alkaline earth metal or zinc or mixture thereof in an aqueous suspension of aluminum oxide.